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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/787,087

02/27/2004

Gordon Liao

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02/14/2005

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EXAMINER

WAKS, JOSEPH

ART UNIT

PAPER NUMBER

2834

DATE MAILED: 02/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/787,087

Applicant(s)

LIAO, GORDON

Examiner

Joseph Waks

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 February 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: every two conductors connected together by firm combination as recited in claim 5.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claim 5 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The feature of the every two conductors connected together by firm combination is not described in the specification.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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In claim 1, lines 14-15, "a collective winding structure" is indefinite since it is not clear if the recited structure is the same or different from the structure already recited in lines 4-5.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Long (US 4,321,497) in view of Washizu (US 4,227,108).

Long discloses an inner motor stator winding structure of including separated different- shaped rod conductors 20 combined together to form a collective winding structure, the stator winding structure include a core 16 with slots 58, a plurality of different- shaped, rod conductors 20a-20c, front and rear conductors 22, the conductors being insulated and inserted into the slots, the front, the rear and the different-shaped conductors connected together to form the collective winding structure according to a designed sequence, the contact surfaces of the rod conductors with the front and the rear conductors being conductible, the other surfaces of the conductors of the stator being insulated. However, Long does not disclose the stator including silicon-steel sheets.

Washizu discloses in Figure 5 a dynamoelectric machine having a stator core formed of silicone steel plates 12.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to design the structure as taught by Long and to provide stator core formed of silicone steel plates as taught by Washizu for the purpose of increasing the permeability of the stator core.

Re claim 3, the combined structure discloses the claimed invention except for stator winding structure being applicable to an inner stator for an outer motor or generator. It would have been obvious to one having ordinary skill in the art at the time the invention was made to design the stator for an outer motor or generator service since it merely requires relocating the slots from the inside to the outside surface of the stator core and it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japikse*, 86 USPQ 70.

Re claim 4, the front conductors and the rear conductor having two position holes, and the rod conductor having opposite ends provided with position pins to be inserted in the position holes are shown in Figure 5. In column 4 lines 52-60 Long discloses the position pins inserted in the position holes in sequence being connected by soldering.

Inherently, since the combined structure includes all elements as claimed, the stator structure is able to increase the slot occupied rate of the conductors and to reduce copper loss during output of large current.

8. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Long (US 4,321,497) in view of Washizu (US 4,227,108) and further in view of Kawabata et al. (US 5,422,526).

The combined structure discloses all elements essentially as claimed. However, it does not disclose the rod conductor having its opposite ends connected with the front and the rear conductor by bolts.

Kawabata et al. disclose the motor coil structure having the rod conductor 22 with the opposite ends connected to the front and rear conductors 24 by bolts 34 for the purpose of increasing the contact area and to provide reliable connections between conductors.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to design the combined structure and to provide the rod conductor having its opposite ends connected with the front and the rear conductor by bolts as taught by Kawabata et al. for the purpose of increasing the contact area and to provide reliable connections between conductors.

Allowable Subject Matter

9. Claims 6, 8 and 9 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

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Re claim 6, the feature of the position pin formed with male threads to be screwed with a nut after the pin being inserted through the position hole, in combination with the other limitations present, are neither disclosed nor taught by the prior art of record.

Re claims 8 and 9, the feature of the rod conductor, the front and rear conductors being U-shaped or L-shaped, in combination with the other limitations present, are neither disclosed nor taught by the prior art of record.

Prior Art

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Waks whose telephone number is (571) 272-2037. The examiner can normally be reached on Monday through Thursday 8 am to 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren E. Schuberg can be reached on (571) 272-2044. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Joseph Waks
Primary Examiner
Art Unit 2834

2/9/05